



FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 2997-1-3-1-4	SERIAL NO. 09/461,663
	APPLICANT BARCLAY	
	FILING DATE December 14, 1999	GROUP ART 165/

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROP.
JSW	AA	5,688,500	11/18/97	Barclay	424	93.1	
JSW	AB	5,547,699	8/20/96	Iizuka et al.	426	615	
JSW	AC	5,518,918	5/21/96	Barclay	435	257.1	
JSW	AD	5,492,828	2/20/96	Premuzic et al.	435	245	
JSW	AE	5,415,879	5/16/95	Oh	426	2	
JSW	AF	5,272,085	12/21/93	Young et al.	435	254.2	
JSW	AG	5,133,963	7/28/92	Ise	424	94.61	
JSW	AH	5,012,761	5/7/91	Oh	119	6.8	
JSW	AI	4,792,418	12/20/88	Rubin et al.	554	186	
JSW	AJ	4,758,438	7/1988	Stroz et al.	426	3	
JSW	AK	4,304,794	12/1981	Dwivedi et al.	426	548	
JSW	AL	3,924,017	12/1975	Lee et al.	426	548	
JSW	AM	3,908,028	9/1975	Neely et al.	426	538	
JSW	AN	3,908,026	9/1975	Neely et al.	426	538	
JSW	AO	3,667,969	6/1972	Kracauer	426	548	
JSW	AP	3,647,482	3/1972	Yueh	426	537	
JSW	AQ	3,296,079	1/1967	Griffin	424	49	
JSW	AR	5,130,242	07/14/92	Barclay	435	134	
JSW	AS	4,670,285	06/02/87	Clandinin et al.	426	602	
JSW	AT	4,871,551	10/03/89	Spencer	426	2	

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<i>Jan</i>	AU	5,340,742	08/23/94	Barclay	435	256.8	
<i>Jan</i>	AV	5,340,594	08/23/94	Barclay	426	49	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
<i>Jan</i>	AW	WO 89/00606	1/26/89	PCT	—	—		
<i>Jan</i>	AX	WO 88/10112	12/29/88	PCT	—	—		
<i>Jan</i>	AY	60-105471	10/6/85	JAPAN	—	—		
<i>Jan</i>	AZ	58-213613	6/10/85	JAPAN	—	—		
<i>Jan</i>	BA	58-196068	5/17/85	JAPAN	—	—		
<i>Jan</i>	BB	WO 92/12711	08/06/92	PCT	—	—		
<i>Jan</i>	BC	1/557/635	2/21/69	FRANCE	—	—		
<i>Jan</i>	BD	0 231 904 A2	08/12/87	EPO	—	—		
<i>Jan</i>	BE	WO 91/14427	10/03/91	PCT	—	—		

EXAMINER <i>John K. Wan</i>	DATE CONSIDERED <i>12-12-00</i>
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OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)

BF	Ainsworth, "Introduction and Keys to Higher Taxa.", pp. 1-7, 1973, in <i>The Fungi. An Advanced Treatise</i> , Vol. 4B, (G.C. Ainsworth et al. eds., Academic Press)
BG	Bahnweg et al., "A New Approach to Taxonomy of the Thraustochytriales and Labyrinthulales", pp. 131-140, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
BH	Bartnicki-Garcia, "The Cell Wall: A Crucial Structure in Fungal Evolution", pp. 389-403, 1988, in <i>Evolutionary Biology of the Fungi</i> , (A.D.M. Rayner et al. eds., Cambridge University Press)
BI	Behrens et al., "Eicosapentaenoic Acid from Microalgae", p. 623, col. 2, abstract no. 193025d, 1989, Chemical Abstracts, Vol. 111, No. 21, Nov. 20.
BJ	Cavalier-Smith, "The Origin of Nuclei and of Eukaryotic Cells", pp. 463-468, 1975, <i>Nature</i> , Vol. 256
BK	Cerda-Olmeda et al., "A Biography of <i>Phycomyces</i> ", pp. 7-26, 1987, in <i>Phycomyces</i> , (Cerda-Olmeda et al. eds., CSH Laboratory)
BL	Couch et al., 1973, <i>Lipids</i> , 8(7):385-392
BM	Cruickshank, 1934, "Studies in Fat Metabolism in the Fowl" in <i>Biochem. J.</i> , 28:965-977
BN	Dick, "Saprolegniales", pp. 113-144, 1973, in <i>The Fungi. An Advanced Treatise</i> , (G.C. Ainsworth et al. eds., Academic Press)
BO	Ellenbogen, "Polyunsaturated Fatty Acids of Aquatic Fungi: Possible Phylogenetic Significance", pp. 805-811, 1969, <i>Comp. Biochem. Physiol.</i> , Vol. 29
BP	Emerson, "Current Trends of Experimental Research in the Aquatic Phycomycetes", pp. 169-200, 1950, <i>Ann. Rev. Micro.</i> , Vol. 4
BQ	Erwin, "Comparative Biochemistry of Fatty Acids in Eukaryotic Microorganisms", pp. 41-143, 1973, in <i>Lipids and Biomembranes of Eukaryotic Microorganisms</i> , (J. Erwin ed., Academic Press)
BR	Findlay et al., "Biochemical Indicators of the Role of Fungi and Thraustochytrids in Mangrove Detrital Systems", pp. 91-103, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
BS	Fisher et al., 1957, <i>J. Nutr.</i> , 63:119-129
BT	Fuller, et al., "Isolation and Pure Culture Study of Marine Phycomycetes", pp. 745-756, 1964, <i>Mycologia</i> , Vol. 56
BU	Gellerman et al., "Methyl-Directed Desaturation of Arachidonic to Eicosapentaenoic Acid in the Fungus, <i>Saprolegnia Parasitica</i> ", pp. 23-30, 1979, <i>Biochim. Biophys. Acta</i> , Vol. 573
BV	Goldstein, "Development and Nutrition of New Species of Thraustochytrium", pp. 271-279, 1963, <i>Am. J. Bot.</i> , Vol. 50
BW	Goldstein et al., "Biology of a Problematic Marine Fungus, <i>Dermocystidium</i> sp. II. Nutrition and Respiration", pp. 468-472, 1969, <i>Mycologia</i> , Vol. 61

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BX	Goldstein et al., "Biology of a Problematic Marine Fungus, Dermocystidium sp. I. Development and Cytology", pp. 1-11, 1966, <i>Archiv for Mikrobiologie</i> , Vol. 53.1
BY	Henderson et al., "Lipid Composition and Biosynthesis in the Marine Dinoflagellate <i>Cryptocodinium Cohnii</i> ", pp. 1679-1683, 1988, <i>Phytochemistry</i> , Vol 27. No. 6
BZ	Hori et al., "The Nucleotide Sequence of 5S rRNA from a Cellulai Slime Mold <i>Dictyostelium Discoideum</i> ", pp. 5535-5539, 1980, <i>Nucl. Acids Res.</i> , Vol. 8
CA	Hunter, "Fish Oil and Other Omega-3 Sources", pp. 1592-1596, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64
CB	Jong et al., "American Type Culture Collection Catalogue of Fungi/Yeast", pp. 350 and 378, <i>American Type Culture Collection</i> , 17th Edition, 1987.
CC	Kates, "Techniques of Lipidology: Isolation, Analysis and Identification of Lipids", pp. 186-278, 1986, <i>Laboratory Techniques in Biochemistry and Molecular Biology</i> , Vol. 3
CD	Kyle, "Microalgae as a Source of EPA-Containing Oils", p. 1251, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64
CE	Lepage et al., "Improved Recovery of Fatty Acid Through Direct Transesterification Without Prior Extraction or Purification", pp. 1391-1396, 1984, <i>J. Lipid Res.</i> , Vol. 25
CF	Lipstein et al., "The Nutritional and Economic Value of Algae for Poultry" in <i>Algae Biomass</i> , G. Shelef and C.J. Soeder, eds., Elsevier/North-Holland Biomedical Press, 1980, pp. 667-685
CG	Lipstein et al., 1980, <i>Br. Poultry Sci.</i> , 21:9-21
CH	Mannella et al., "Interrelatedness of 5S RNA Sequences Investigated by Correspondence Analysis", pp. 228-235, 1987, <i>J. Mol. Evol.</i> , Vol. 24
CI	Miller, "Isolation and Pure Culture of Aquatic Phycomycetes by Membrane Filtration", pp. 524-527, 1967, <i>Mycologia</i> , Vol. 59
CJ	Moss, "Biology and Phylogeny of the Labrinthulales and Thraustochytriales", pp. 105-129, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
CK	Murty et al., 1961, <i>J. Nutrition</i> , 75:287-294
CL	Navarro et al., 1972, <i>J. Sci. Fd. Agric.</i> , 23:1287-1292
CM	Perkins, "Phylogenetic Considerations of the Problematic Thraustochytriaceous-Labrinthulid-Dermocystidium Complex Based on Observations of Fine Structure", pp. 45-63, 1974, <i>Veroff. Inst. Meeresforsch. Bremerh. Suppl.</i> , Vol. 5
CN	Pigot, "The Need to Improve Omega-3 Content of Cultured Fish", pp. 63-68, 1989, <i>World Aquaculture</i> , Vol. 20
CO	Pohl et al., "Fatty Acids and Lipids of Marine Algae and the Control of Their Biosynthesis by Environmental Factors", pp. 473-523, 1979, <i>Marine Algae in Pharmaceutical Science</i> , (Hoppe et al. eds.)
CP	Reiser, 1951, <i>J. Nutrition</i> , 44:159-175

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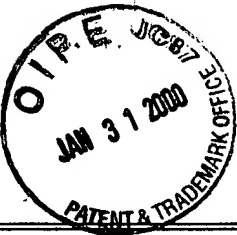
Ja	CQ	Ryther, "Cultivation of Macroscopic Marine Algae", pp. 79-88, 1983, <i>Solar Energy Research Institute Aquatic Species Program Review</i> . Proc of the March 1983 Principal Investigators Meeting, SERI/CP-231 1946
Ja	CR	Schlenk, "Urea Inclusion Compounds of Fatty Acids", pp. 243-267, 1954, <i>Prog. Chem. Fats and Other Lipids</i> , Vol. 2
Ja	CS	Schneider, "Cultivation of Micro-organisms. Section 3.2: Fungi", pp. 337-345, 1976, in <i>Marine Ecology</i> , Vol. 3, Part 1. <i>Cultivation</i> , (O. Kinne ed., Wiley and Sons)
Ja	CT	Simopoulos et al. (eds.), <i>Health Effects of Polyunsaturated Fatty Acids in Seafoods</i> , Chaps. 2-5, 7, 17, 1986, Academic Press)
Ja	CU	Sorokin, "Dry Weight, Packed Cell Volume and Optical Density", pp. 321-343, 1973 in <i>Handbook of Psychological Methods: Culture Methods and Growth Measurements</i> , (J.R. Stein ed., Cambridge University Press)
Ja	CV	Sparrow, <i>Aquatic Phycomycetes</i> , pp. 36-39, 1960, University of Michigan Press
Ja	CW	Wassef, "Fungal Lipids", pp. 159-232, 1977, <i>Adv. Lipid Res.</i> , Vol. 15
Ja	CX	Weete, "Fatty Acids", pp. 49-95, 1980, in <i>Lipid Biochemistry of Fungi and Other Organisms</i> , (Plenum Press)
Ja	CY	Yamada et al., "Production of Arachidonic Acid and Eicosapentaenoic Acid by Microorganisms", p. 1254, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64
Ja	CZ	Akimoto et al., "Metal Salts Requisite for the Production of Eicosapentaenoic Acid by a Marine Bacterium Isolated from Mackerel Intestines", pp. 504-508, 1991, <i>JAOCS</i> , Vol. 68, July.
Ja	DA	Ando et al., "Incorporation of n-3 Polyunsaturated Fatty Acids into Phospholipids of a Marine Bacterium <i>Vibrio</i> sp. Cultivated with Sardine Oil", pp. 169-171, 1992, <i>J. Ferm. Bioeng.</i> , Vol. 73.
Ja	DB	Bajpai et al., "Production of Docosahexaenoic Acid by <i>Thraustochytrium aureum</i> ", pp. 706-710, 1991, <i>Appl. Microbiol. Biotechnol.</i> , Vol. 35.
Ja	DC	Bajpai et al., "Effects of Aging <i>Mortierella</i> Mycelium on Production of Arachidonic and Eicosapentaenoic Acids", pp. 775-780, 1991, <i>JAOCS</i> , Vol. 68, October.
Ja	DD	Bajpai et al., "Optimization of Production of Docosahexaenoic Acid (DHA) by <i>Thraustochytrium aureum</i> ATCC 34304", pp. 509-514, 1991, <i>JAOCS</i> , Vol. 68, July.
Ja	DE	Bajpai et al., "Eicosapentaenoic Acid (EPA) Formation; Comparative Studies with <i>Mortierella</i> Strains and Production by <i>Mortierella elongata</i> ", pp. 1294-1298, 1991, <i>Mycol. Res.</i> , Vol 95.
Ja	DF	Behrens et al., "Eicosapentaenoic Acid from Microalgae", pp. 253-259, 1989, <i>Novel Microb. Prod. Med. Agric.</i>
Ja	DG	Boswell et al., "SCO Production by Fermentative Microalgae", pp. 274-286, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
Ja	DH	Cohen et al., "Overproduction of γ -Linolenic and Eicosapentaenoic Acids by Algae", pp. 569-572, 1992, <i>Plant Physiol.</i> , Vol. 98.

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DI	Gandhi et al., "Production of the Polyunsaturated Fatty Acids Arachidonic Acid and Eicosapentaenoic Acid by the Fungus <i>Pythium ultimum</i> ", pp. 1825-1830; 1991, <i>J. Gen. Microbiol.</i> , Vol. 137.
DJ	Hansen et al., "Effects of Culture Conditions on Accumulation of Arachidonic and Eicosapentaenoic Acids in Cultured Cells of <i>Rhytidadelphus squarrosus</i> and <i>Eurhynchium striatum</i> ", pp. 1837-1841, 1991, <i>Phytochemistry</i> , Vol. 30.
DK	Kendrick et al., "Microbial Polyunsaturated Fatty Acids of Potential Commercial Interest", pp. 59-65, 1992, <i>SIM Industrial Microbiology NEWS</i> , Vol. 42.
DL	Kendrick et al., "Lipids of Selected Molds Grown for Production of n-3 and n-6 Polyunsaturated Fatty Acids", pp. 15-20, 1992, <i>LIPIDS</i> , Vol. 27.
DM	Kyle et al., "Bioproduction of Docosahexaenoic Acid (DHA) by Microalgae", pp. 287-300, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
DN	Kyle et al., "Microalgae as a Source of EPA-Containing Oils", pp. 117-121, 1988, <i>Proc. - World Conf. Biotechnol. Fats Oils Ind.</i>
DO	Radwan, "Sources of C ₂₀ -Polyunsaturated Fatty Acids for Biotechnical Use", pp. 421-430, 1991, <i>Appl. Microbiol. Biotechnol.</i> , Vol. 35.
DP	Yazawa et al., "Production of Eicosapentaenoic Acid from Marine Bacteria", pp. 29-51, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
DQ	Yongmanitchai et al., "Screening of Algae for Potential Alternative Sources of Eicosapentaenoic Acid", pp. 2963-2967, 1991, <i>Phytochemistry</i> , Vol. 30.
DR	Hagemeister et al., STN Database, AN 88:13,222 Biobusiness for Milchwissenschaft, Vol. 43, No. 3, pp. 153, 155-158
DS	T. Long, STN Database, AN 89:532,569 Caplus for WO 88-US2483.
DT	Todorov, D., "Possibilities for Increasing the Biological Value of Alimentary Protein", KHIGZDRAVFODAZ, 1978, 21(3), p. 291-297.
DU	Yamada et al., "Production of Dihomo- γ -Linolenic Acid, Arachidonic Acid and Eicosapentaenoic Acid by Filamentous Fungi", pp. 118-138, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
DV	Kyle et al., "Microalgae as a Source of EPA-Containing Oils", pp. 117-121, 1988, <i>Proc. World Conf. Biotechnol. Fats Oils Ind.</i>

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